

# ARIZONA'S 10 MOST UNWANTED

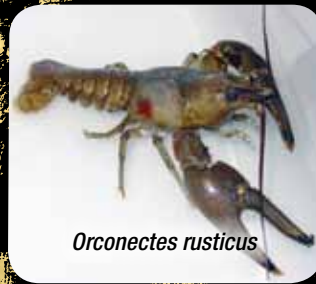
## AQUATIC INVASIVE SPECIES

### QUAGGA AND ZEBRA MUSSELS

*Origin – Eastern Europe and Ukraine*  
Prolific populator; Removes food/nutrients from water column, clogs pipes and water conveyance infrastructure, damages boat motors and marinas. Management/eradication costs can be enormous for power and water supply agencies. Dispersal by boats and equipment, pipes, canals, live wells.



GEORGE ANDREJKO, AGFD



JEFF GUNDERSON, UNIVERSITY OF MINNESOTA SEA GRANT PROGRAM

### RUSTY CRAYFISH

*Origin – Ohio River Basin*  
Used as bait, aquatic weed control, and as a human food source. Aggressive species that deprives native fish of their prey and cover. Invasion has lead to severe impacts on native species in the western United States. Voracious appetite for larval fish, plants and insects; cannibalistic tendencies. Dispersal by bait buckets and aquarium discard.

### HYDRILLA

*Origin – Eurasia, Africa and Australia*  
Illegally released into Florida waters in the 1960's; "invisible menace" until it fills a lake or river by "topping out" at the surface. Can grow an inch a day and will shade-out and outcompete native aquatic plants. Clogs irrigation/flood-control canals, will greatly slow water movement and seriously interferes with boating, swimming and fishing. Dispersal to new waters mainly as free-floating fragments or hanging on boats/trailers.



VIC RAMEY, UNIV. OF FLORIDA/IFAS CENTER FOR AQUATIC AND INVASIVE PLANTS



USDA

### NEW ZEALAND MUDSNAIL

*Origin – New Zealand*  
Out-competes native Arizona snails for available food resources/territory; Very prolific and spreads quickly by floating and attaching to vegetation to rapidly increase its range. Dispersal by boaters and anglers (waders, boating gear, fishing equipment, etc.)

### ASIAN CARP

*Origin – Eurasia and China*  
Includes bighead, black, and silver carp. Introduced into U.S. for algae control and as a food fish. Currently established in the Mississippi drainage; Large bodied fish (60lbs) that cause jumping-fish hazards to anglers and boaters; Adults outcompete juvenile sportfish for planktonic food. Dispersal by bait buckets and unintentional illegal commercial transport and stocking.



USEFWS



TROY EVANS

### GIANT SALVINIA

*Origin – South America*  
Pervasive aquatic fern that can greatly alter aquatic ecosystems; Forms very thick surface mats and completely blocks light and oxygen penetration; Impedes water flow, clogs water conveyance, and eliminates all other plant/fish species. Dispersal by boats, equipment, and natural downstream flow.

### RED CLAW CRAYFISH

*Origin – Northern Australia*  
Used for commercial farming as a human food source and aquarium trade. Successful invader having impacts on fishes, aquatic species, aquatic habitats and native amphibians; cannibalistic tendencies. Very prolific, highly tolerant to environmental changes, and has a wide range of dietary requirements. Dispersal by bait bucket dumping and illegal stocking.



CHARLES WEBEL



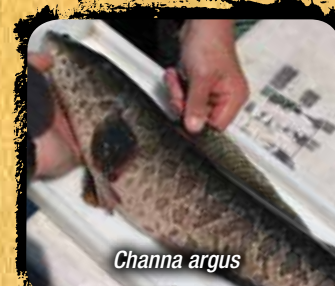
GEORGE ANDREJKO, AGFD

### AMERICAN BULLFROG

*Origin – Central and Eastern United States*  
Accidentally introduced into the West during trout stocking, aquarium trade, and pest control. Competes with and preys on all aquatic life, including native species. Responsible for the disappearance of many amphibian and fish species, including a long list of endangered species. Current year-round fishing/hunting season on bullfrog in Arizona. Self dispersal through species movement and human interaction.

### NORTHERN SNAKEHEAD

*Origin – China and Korea*  
Fish market industry; human food source. Voracious predators that prey on native species and are exceptionally successful in competing with other fish for food and habitat. Ability to reproduce five times a year and very aggressive at protecting their young. Could severely impact sport fish populations, but not yet found in Arizona. Dispersal by illegal dumping of live fish and viable eggs.



USEFWS



WHITE RIVER PARTNERSHIP ORGANIZATION

### DIDYMO (ROCK SNOT)

*Origin – Northern Europe and Northern North America (Vancouver Island)*  
Affects stream habitats and sources of food for fish and makes recreational activities unpleasant. Creates dense algal blooms that block sunlight and disrupts ecological processes causing a decline in native plant and animal life. Dispersal by watercraft, fishing gear, boating equipment and waders.

## YOU CAN HELP STOP THESE INVADERS!

**Hunters, anglers and outdoor recreationists can do their part.**

**STOP AQUATIC HITCHHIKERS** by cleaning, draining and drying your watercraft and fishing equipment.

**DON'T RELEASE PETS** into the wild.

**DON'T TRANSPORT LIVE FISH** or other aquatic species for release elsewhere.

**DON'T PLANT A PEST:** clean your vehicle and hunting/fishing equipment of plant parts/seeds and use native plants for landscaping.

For more information visit [www.azgfd.gov/ais](http://www.azgfd.gov/ais) and [www.az.gov/invasivespecies](http://www.az.gov/invasivespecies).

Arizona Game and Fish Department

